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Educational Activities

"I hear and I forget. I see and I remember. I do and I understand."

This is the essence of a visit to Acadia National Park that utilizes the park's wonderful resources for teaching. Education becomes active, experiential, and fun. Acadia helps textbooks and lesson plans come to life through a multitude of experiences whether they are discovering a frog at the edge of a pond, a visit to the past at the Islesford Historical Museum, or crouched by a tide pool observing the diversity of life.

Please remember to practice stewardship during your visit to Acadia National Park. Bring only memories (and students!) home. We hope you and your students unearth a vast array of new discoveries and find Acadia a perfect extended classroom!

PROGRAMS FOR EDUCATIONAL GROUPS

The park offers all day, ranger-led programs in natural and cultural history topics for the third through sixth grade classes in the local school districts only. Occasionally, school groups beyond the local area may schedule a special request program by contacting the education coordinator at (207) 288-8822.

CREATING YOUR OWN PROGRAM

Available for free to all teachers or other group leaders interested in planning their own educational trip to the park are teacher guides to each of the programs offered for the local school district. Titles include: *Carriage Road Explorers*, *Junior Rangers*, *Animals of Acadia*, *Carroll Homestead*, *Shoreline Discovery*, *Island Life*, *Where in the World is Tuzigoot?*, *Pond Ecology*, *Geology*, and *Natural Resources*. The background information and pre and post activities in the teacher guides can help to design your own program. Educators are welcome to request a free copy from the education coordinator.

Also available for sale is *The Activity Guide to Acadia National Park*, which covers animals, shoreline, and geology in a more detailed format than the free teacher guides. The Teacher Resource Library at the park's education office offers over 500 book titles as well as videos, discovery kits on animals and geology for loan. Contact the park education coordinator.

The ranger-led programs during the summer can serve as excellent resources for teachers who are interested in learning more about natural history and the history of this area to add to their lessons. Schedules of these activities are available at the

visitor center, Sieur de Monts Spring Nature Center, and the campground entrance stations. The self-guiding trails are also excellent for group exploration. Copies of trail texts are included in this guide in appendix I.

THE JUNIOR RANGER PROGRAM

Although originally designed for children of families visiting the park during the summer season, the junior ranger program can be adapted for use by organized groups. There are two series, one for children seven and younger and one for children eight and older. To become a junior ranger, the candidate must complete a portion of the activities in the junior ranger book and attend ranger-led activities. Upon completion, the junior ranger earns a signed certificate and an official pin. Junior ranger books are available at the visitor center, Sieur de Monts Spring Nature Center, and the entrance stations of Blackwoods and Seawall Campgrounds. An *Activity Guide to the Carriage Roads* is also available.

RANGER-LED PROGRAMS

Several ranger programs are appropriate for children. Check the park newspaper, the *Beaver Log*, for information. Both Blackwoods and Seawall Campground offer campfire programs each evening that are appropriate for children. Call the education coordinator to discuss your specific needs at (207) 288-8822.

HIKING TRAILS GOOD FOR CHILDREN AGES 5 AND UP

- Great Head
- Gorham Mountain
- Bubble Rock
- Beech Mountain
- Ship Harbor
- Wonderland

ACTIVITY IDEAS WITH CHILDREN'S GROUPS FOR SPECIFIC PARK AREAS

Sieur de Monts Spring Area

For a pleasant walk in the area, the Jesup Trail and the Hemlock Trail combine to make an easy one mile roundtrip. Through birch forest to meadow to towering hemlocks, three different Acadia habitats can be enjoyed.

Acadia National Park Nature Center

The Nature Center offers exhibits on the "science behind the scenery" of the park. Learn more about the important work of park biologists and researchers as they, armed with valuable information, protect park resources. In addition, the Nature

Center offers an animal track matching game and taped frog calls (fun to listen to). The lawn outside the Nature Center is a good location to let children run. A small bookstore is available. *Free. Open from mid-May to mid-September.*

Sand Beach Area

See how many different colors of “sand” particles can be found. Can they guess which ones come from shells? What animals might those shells have belonged to?

Jordan Pond Area

Youth groups — The *Carriage Road Explorers* book helps young people discover the carriage roads. It is available for sale at park visitor centers. *Estimated time: 45 minutes.*

Children can create their own trail guide for the **Jordan Pond Nature Trail** using the trail guide as a reference. The lawn in front of the restaurant’s outdoor seating is ideal to run kids! *Estimated time: one hour. See appendix I.*

Tree Key Activity — See how many trees you can identify using the tree key on page 5-11.

Bubble Rock

Youth and Older — The hike up South Bubble to Bubble Rock is appropriate for children ages five and up. Some questions to ask along the route: Why is the forest almost all beech trees? How did Bubble Rock arrive at this particular resting place? Will it stay here forever? What could make it fall? Have students look for other evidence glaciers left behind. Please impress upon youngsters the importance of staying on the trail, for both safety and resource protection.

Cadillac Mountain Summit

For All Ages — See if your group can match the surrounding panorama with the landmark names by using the interpretive signs on the summit.

Ship Harbor Trail

Have children compare life on the mudflat with life in a tidepool. This can be done without digging in the mudflat or removing animals from the tidepool. Have students spread out along the edge of the mudflat and come up with a list of what life is like in the mud, on the mud, or under the water when the tide comes in. Who visits the mudflat for food? What evidence do they see? When visiting tidepools on the rocky point, have students sit at upper level tidepools and list what life is like under the seaweeds, on the rocks, in the water. How are the two areas similar? How

are they different? Where would they like to live? Remember to review the “Suggestions for a Low Impact Visit” on page 3-76.

Carroll Homestead Self-Guiding Trail

Ask children to imagine what the Carroll children did at the Mountain House. What would life have been like without TV, computers, phones, video games, and cars? Let them put together a news show based on their insights. See appendix I.



Information for Kids

Before visiting Acadia National Park see how much you can learn about the park!

THE FACE OF ACADIA

Acadia National Park is on Mount Desert Island off the coast of Maine. The island is 18 miles long and 14 miles wide, cut from granite with steep cliffs dropping to the ocean. One third of the island is Acadia National Park. Acadia has rocky coastline, lakes, ponds, meadows, forest, and mountains. Seven mountains are over 1000 feet high.

Much of the topography is due to the carving action of glaciers, thick slabs of ice that extended south from Canada. Geologists know that many glaciers have covered Maine. The last glacier to cover Maine melted 11,000 years ago.

As the most recent glacier came south, it cut through an east-west ridge of granite, leaving mountains separated by valleys. Big blocks of ice were left behind forming many lakes and ponds. When the glacier melted, the sea level rose, flooding the valleys. One of these valleys is a fjord, Somes Sound. Over the years, the forces of erosion and crashing waves continued to wear down the rock, slowly changing the island. Eventually vegetation began to cover the island.

Today Acadia has a mixed forest. The coniferous forest on Acadia consists of spruce, fir, and pine. This forest survived a large fire in 1947. Deciduous forest trees such as aspen, maple and birch grew back in the burned areas but conifers may someday replace most of them. Plants that are adapted to other special habitats can be found in the marshes, meadows, and on the mountaintops of Acadia.

A PARK IS BORN

In the early 1900s, some summer residents were concerned that the island forests would be cut and that homes someday would line every inch of the rocky coast. A group of citizens began buying land to preserve it. They worked hard for years to convince the Federal Government to take over the land. In 1916 President Woodrow Wilson created Sieur de Monts National Monument. More land was given and in 1919 the name was changed to LaFayette National Park, making it the first national park east of the Mississippi River. In 1929 the name changed one more time to Acadia National Park. All of the land was donated by people who wanted to protect it.

Visitors today enjoy those earlier efforts. The millions who visit Acadia each year can hike on 120 miles of trails, bicycle, horseback ride, cross-country ski or walk on 44

miles of carriage roads, visit tidepools, attend park ranger talks or just sit quietly along the rocky coast.

Acadia is part of the National Park System, which includes 384 areas. These special places are protected because of their natural beauty or historical importance. We can visit our national parks to experience and appreciate nature or to learn about the past. Operated by the Federal Government, the National Parks belong to each of us.

HISTORY! HISTORY! READ ALL ABOUT IT!

Native Americans lived on Mount Desert Island at least 6,000 years ago. Some lived here only part of the year, others year round. A French explorer, Samuel Champlain, was the first European to name the island in 1604. He named the island Isles de Monts Deserts which in French means “the island of barren mountains.” For many years, England and France fought over the area, with England finally winning in 1759.

Early island settlers fished, built boats, farmed and cut timber. In the middle 1850s, people from New York and Boston began to come to enjoy the scenery. Hotels were built in some island towns. Many of these visitors were wealthy and built large summer homes called cottages. In 1947, a large fire burned 17,000 acres, destroying many cottages and scorching almost one third of park land.

THE WILD SIDE OF ACADIA

Acadia is home for a large variety of animals. About 50 species of mammals and over 300 species of birds are found in the park. Some live here year round, while others migrate through. There are also many amphibians and reptiles, including five species of snakes. Common land mammals include beavers, white-tail deer, red fox, muskrats, porcupines, skunks, raccoons, snowshoe hares, red squirrels, and chipmunks. There are also small numbers of black bear, river otter, and coyotes. Some common birds are chickadees, herring gulls and cormorants. Some people are lucky enough to see bald eagles and ospreys. The ocean surrounding the island is home for harbor seals, lobster, harbor porpoise and many kinds of fish. At low tide you can see many marine animals in the pools.

STOP THAT PLANT!

It may sound strange but one way Acadia helps to protect habitat is by removing plants that don't belong. Non-native plants are called exotics. Many of the exotics at Acadia escaped from gardens. Wind, birds, and other animals helped to carry their seeds into the park. Botanists in the park are on the lookout for one exotic in particular - purple loosestrife. This plant loves wetland habitats. Loosestrife has a tendency to “take over” the wetland habitat, choking out plants that should be there.

By removing purple loosestrife and other plants that are not native, Acadia is protecting habitats for plants and animals that do belong.

WATER, WATER, EVERYWHERE

One thing Acadia has is a lot of WATER! There are streams, lakes, ponds, marshes and forty miles of ocean shoreline. Park biologists are concerned with the health of these aquatic systems. They test the water for pH (a measure of acidity) and some pollutants.

There is some concern about acid precipitation which can be in the form of rain, snow, or fog. Rainfall at Acadia is about ten times more acidic than normal rainfall. Acid precipitation can drop the pH level in water habitats. The variety of plants and animals living there could be affected. Although Acadia's water systems are healthy now, biologists continue to monitor so they can detect possible changes.

BACK FROM THE BRINK

Acadia is concerned with the protection of endangered species. The bald eagle (still threatened in Maine) and the peregrine falcon (endangered in Maine) are found at Acadia. Both bird populations declined due to loss of habitat, trapping, hunting, and chemical pesticide use. One pesticide, DDT, caused egg shells to be very thin and crack. The young could not survive.

Acadia National Park took part in a program to reintroduce peregrine chicks into the wild. This is known as hacking. Acadia "hacked" 22 peregrine chicks from 1984-1986. Since 1991, a returning adult pair has raised chicks successfully here. 1991 was the first year since 1956 that peregrines had bred in Acadia. Since 1991, the birds have raised a family. Every spring park biologists watch for signs of the peregrines to return.

OH, SAY CAN YOU SEE?

Many visitors are surprised to learn that Acadia's air is sometimes polluted. Acadia faces a problem with ground level ozone—a pollutant created through a chemical reaction with other pollutants in the presence of sunlight. Wind patterns carry pollutants from the Midwest and east coast cities such as Boston and New York. As these winds reach the coast of Maine and Acadia, unhealthy ozone levels can occur, especially in the summer.

Ozone in the atmosphere protects us from harmful sun rays; ozone near the ground is a problem. Although you can't see ozone, it makes it difficult to breathe, especially for young and elderly people. Often, other visible pollutants are found with ozone.

These pollutants can cause poor visibility. Far away mountains and islands can be hard to see. Air quality specialists monitor the ozone levels and alert visitors when ozone levels are high.

PACKED PARK

Acadia is not a large park, and with millions visiting every year, the park can sometimes be very congested. Especially in the summer, the scenic Park Loop Road is crowded and parking lots overflow. Park planners look to the future to find answers to help lessen the impact crowding has on Acadia.

HELP WANTED – RANGER CLASSIFIEDS

Would you like to work in a National Park someday? Listed below are just some of the jobs that rangers do.

- *Law Enforcement Officer*: enforces rules to protect the park and performs search and rescue when a visitor is lost or hurt.
- *Maintenance Worker*: builds or repairs trails, maintains buildings, restrooms and roads in the park.
- *Biologist*: studies the plants and animals of the park and monitors the park environment.
- *Interpreter*: helps visitors learn more about the park through education programs and providing information.
- *Administrator*: keeps track of money, hires rangers, plan for the park's future.
- *Fire Management Officer*: protects the park from fire.



Tree Key

- 1) Leaves needle-like or very small and scalelike; have cones Go to 2
- 1) Leaves broad, deciduous Go to 12

- 2) Leaves long, needle-like Go to 3
- 2) Leaves small and scalelike, hugging branches Go to 11

- 3) Needles in bundles Go to 4
- 3) Needles occurring singly Go to 8

- 4) Needles in groups of 2 Go to 5
- 4) Needles in groups of more than 2 Go to 6

- 5) Needles long, 3"-8", cones 1 1/2" to 2 1/2" long **Red Pine**
- 5) Needles short, 3/4" - 1 5/8", cones curved and in pairs **Jack Pine**

- 6) Needles many, stemming from small spurs on branches;
deciduous conifer. **Tamarack**
- 6) Needles attached directly to twigs Go to 7

- 7) Needles in groups of 3 **Pitch Pine**
- 7) Needles in groups of 5 **White Pine**

- 8) Needles flat, not sharp **Balsam Fir**
- 8) Needles sharp Go to 9

- 9) Needles 1/4" - 5/8" long, twigs hairy Go to 10
- 9) Needles 3/8" - 3/4" long, twigs hairless **White Spruce**

- 10) Needles 1/4" - 1/2", cones gray-brown **Black Spruce**
- 10) Needles 1/2" - 5/8" long, cones reddish-brown,
hairs on twigs red **Red Spruce**

- 11) Leaves small and scale-like,
occur in flattened sprays; stringy bark **Northern White Cedar**

- 12) Leaves and branches opposite Go to 13
- 12) Leaves and branches alternate Go to 15

- 13) Bark shows pale green stripes, leaves large with 3 lobes,
toothed margin **Striped Maple**
- 13) Leaves with more than 2 lobes, bark not striped Go to 14
- 14) Leaves with 3-5 lobes, green underneath,
twigs and buds hairy **Mountain Maple**
- 14) Leaves with 3-5 lobes, silvery underneath, twigs smooth **Red Maple**
- 15) Leaves compound with 11-17 toothed leaflets,
bark smooth and gray-brown **Mountain Ash**
- 15) Leaves single Go to 16
- 16) Leaves oval, trunk peeling (mature tree) Go to 17
- 16) Leaves wide at base, tapering to narrow point,
trunk not peeling **Gray Birch**
- 17) Leaves hairy underneath, mature tree with white bark,
peeling in layers **White Birch**
- 17) Leaves hairless, mature tree with shiny yellow or silver-
gray bark, peeling in small, thin curls. **Yellow Birch**